BROWNFIELD REDEVELOPMENT ASSESSMENT REPORT

FOR

CARTER COLOR COAT

(formerly GMC Fisher Body Plant 21)

DETROIT, MICHIGAN

MID980568646

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EXECUTIVE SUMMARY

The Michigan Department of Environmental Quality (MDEQ) Pre-Remedial Group was contracted via a cooperative agreement with the U.S. Environmental Protection Agency (EPA) to conduct Brownfield Redevelopment Assessments (BFRA) as part of the Detroit Brownfield Pilot Project. A BFRA was conducted at the Carter Color Coat property on June 11-12, 1996. The field sampling event included the collection of eighteen (18) surficial soil , two (2) surface water, five (5) wooden block flooring, and six (6) paint chip samples from the Carter Color Coat property. A building wide asbestos investigation and sampling was also conducted. The Michigan Department of Community Health (MDCH) is completing a Health Consultation of the property.

Based on the sample analysis results of the BFRA of the Carter Color Coat property, the MDEQ has determined that the property meets the definition of a facility as defined in Part 201 of the National Resources and Environmental Protection Act (NREPA), 1994 PA 451, as amended. This determination is made because the detected levels of contaminants exceeded the Part 201 of the NREPA Generic Residential Cleanup Soil Criteria for Direct Contact. Benzo(a)anthrecene, benzo(b)fluoranthene, benzo(a)pyrene, dibenz(a,h)anthracene, Aroclor 1254 (PCB), arsenic and lead were detected in the majority of the soil samples. Benzo(a)anthrecene, benzo(b)fluoranthene and benzo(a)pyrene were detected in the majority of the stained wooden block floor samples. All of the paint chip samples had concentrations of lead which also exceeded the Generic Residential and Industrial Cleanup Criteria for Direct Contact.

There are two major migration pathways of concern at the Carter Color Coat property. These are direct contact to these contaminants for area residents and future workers and the potential for friable asbestos fibers and lead particulate from the paint dust to become airborne due to the vandalism which has occurred in the building. Inhalation exposure to on-site workers and off site population of these materials is possible. Groundwater contamination is probably minimal with the removal several years ago of the underground storage tank (UST) from the southeast corner of the property. However, further investigations should be undertaken to determine if additional USTs remain on the property. Migration of surface waters from the truck wells and the zinc phosphating\sludge treatment area pit on the second floor of the building is also minimal as these structures appeared to be sound and not leaking. The geology of the area consists of glacial lacustrine clay and silt deposits overlying bedrock. These lacustrine deposits range from 110 to 120 feet in thickness. The bedrock formation is composed of the Antrim Shale. None of these formations are a viable source of drinking water. The population of the City of Detroit is serviced by the city municipal water system which draws water from Lake Huron and the Detroit River.

Based on the findings of the BFRA investigation and the MDCH Health Consultation Assessment, the following issues should be addressed before or during the redevelopment of the Carter Color Coat property:

- All regulated asbestos containing materials (ACM) should either be removed from the building or encapsulated during any revitalization of the structure. Removal of ACM must follow National Emissions Standards for Hazardous Air Pollutants (NESHAP) guidelines.

- Removal of all lead based paint chips on the building floors will be required during building renovation.

- Removal of the sediment material from the ground floor trench for proper disposal will be required during building renovation.

- Removal of the contaminated wooden block flooring for proper disposal will be required during building renovation.

- All trash and debris which has been dumped in the building or is the result of vandalism should be removed and disposed of properly.

- Restricting building access should be addressed to reduce the risk of direct contact potential for area residents and workers to contaminants found on the property. The main access concerns are the openings into the structure from the ground floor and the lack of a lock on the gate facing Harper Street.

- Appropriate measures to control future worker exposure risks should be followed during any removal/remediation work undertaken at this facility.

- Compliance with Section 7a obligations of NREPA. These obligations include not exacerbating the existing contamination, exercising due care to assure there are not unacceptable exposures and taking reasonable precautions against the reasonable foreseeable activities of third parties.

INTRODUCTION

The MDEQ Pre-Remedial Group was contracted via a cooperative agreement with the U. S. Environmental Protection Agency (EPA) to conduct Brownfield Redevelopment Assessments (BFRA) as part of the Detroit Brownfield Pilot Project. A brownfield is a property, or a portion thereof, that has actual or perceived contamination and an active potential for redevelopment or reuse. Properties which meet these qualifications have been selected by the city of Detroit to be investigated in the Detroit Brownfield Pilot Project.

BFRAs are intended to provide information on abandoned properties where potential environmental contamination may be acting as an impediment to future redevelopment activities. MDEQ Pre-Remedial Group staff conduct environmental investigations to determine the types and locations of past and present industrial activities, potential environmental migration pathways of concern, types and concentrations of potential contaminants and the need for remedial and/or removal actions on the property

The MDEQ conducted a BFRA of the Carter Color Coat property in accordance with the cooperative agreement with the EPA. The BFRA included file and information searches, a reconnaissance inspection of the property, an audit of the property building including the collection of asbestos samples, and the collection of surficial soil, surface water, wooden blocks for the building floors and paint chips from all floors for lead analysis.

PROPERTY BACKGROUND

Property Description

The Carter Color Coat property is located on the corner of Piquette Street and Hastings Street at 6051 Hastings in the city of Detroit, Wayne County, Michigan. An active General Motors Corporation (GMC) facility is located due north, residential homes to the west, three smaller light industrial structures to the south and I-75 to the east. The property structure is a six story building encompassing 600,000 square feet. The concrete covered back lot south of the building is used as a storage area. The entire back lot storage area is surrounded by a ten foot high chain link fence with a gated entranceway opening onto Harper Street.

See Figure 1 for the Property Location Map.

Property History

The building on this property was originally constructed and operated by the GMC Fisher Body Division between 1919 and 1984. Facility operations involved automotive stamping of special discs and tools, dye sets, jigs, and fixtures including prototype and model parts. GMC generated halogenated and non-halogenated spent solvents, spend plating wastes, and ignitable and corrosive wastes from its operation at this location. It also received and stored hazardous wastes from other GMC plants. Between 1985 and 1990, the facility was owned and operated by Cameo Color Coat Incorporated. The property ownership was transferred to Carter Color Coat on October 1, 1990. Carter Color Coat closed and abandoned the facility sometime in 1994. Currently, the property is in the process of tax reversion to the State of Michigan.

Both Cameo and Carter used the same type of process and generated similar wastes. It is believed both color coating companies confined their operations to the ground and second floors of the building and may have used the third and fourth floors for storage. Automobile parts were cleaned and painted using a cathodic electrodeposition painting technology. The facility generated hazardous and non-hazardous sludges from in-process tanks and a wastewater treatment system. Air emissions from the painting operations also occurred (EPA-PRC, 1992).

In August of 1990, a preliminary assessment and sampling were conducted around the former GMC underground storage tank (UST) located in the southeast corner of the property. Soil boring sample analysis indicated the presence of the following contaminants at their highest detection levels: toluene (1.7 part per million (ppm)), ethylbenzene (6.6 ppm), xylenes (9.9 ppm), tetrachloroethane (0.21 ppm), and 1,1,1-trichloroethane (1.7 ppm). Additionally, arsenic (0.49 ppm), chromium (1.1 ppm) and silver (.14 ppm) were also detected. It was determined that the non-gasoline-component contaminants (tetrachloroethane, 1,1,1-trichloroethane and heavy metals) were migrating from the MCI Stripping facility located due south of the property on Harper Street (EPA-PRC,1991).

On April 4, 1991, PRC Management Corporation, a contractor to the EPA, conducted a visual sit inspection (VSI) of the facility in compliance with the Resource Conservation and Recovery Act (RCRA). The VSI located six solid waste management units listed as the following:

- Former GMC Hazardous Waste Drum Storage Area (ground floor)
- Cleaner Tank Sludge Storage Area (second floor)
- Zinc Phosphate Sludge Treatment and Accumulation Area (second floor)
- Paint Tank Sludge Storage Area (second floor)
- Wastewater Treatment System (ground floor)
- Sludge Rolloff hopper (ground floor)
- Former GMC UST (back lot storage area)

The process used by both Cameo and Carter involved pretreating metal parts followed by cathodic electrodeposition of an epoxy-urethane coating. These operations were conducted on he first two floors of the building. Carter Color Coat used the third floor as a warehouse. The upper three floors of the building were not utilized by Carter Color Coat (EPA-PRC,1991).

On February 16, 1994, the Environmental Mitigation Group (EMG) conducted a visual building inspection and collected several asbestos samples from floor and ceiling tiles in the offices on the ground and second floors, located in the eastern half of the structure, as well as an unused auditorium on the sixth floor. Additional asbestos samples were collected from pipe wrapping from the ground floor. Analysis of these samples detected little or no asbestos material present (EMG,1994).

On March 1, 1994, a visual property inspection was conducted by personnel from the MDEQ formerly the Michigan Department of Natural Resources (MDNR)) Southeast Michigan District Office to assess potential hazards at the property relating to residual hazardous materials left by the former occupant and/or illegally dumped after the building became vacant (MDNR,1994). The inspection noted the building was in the process of being stripped of all salvageable materials (MDNR, 1994). No samples were collected during this inspection.

PROCEDURES AND RESULTS

The investigation team conducted a reconnaissance inspection of the Carter Color Coat property and surrounding area on February 21, 1996 to make observations to aid in characterizing the property. The reconnaissance inspection included a walk-through of the property to determine appropriate health and safety requirements for conducting on-site activities. The team also determined sampling locations during the reconnaissance inspection and performed a building audit. The investigation team conducted the sampling task at this property on June 11 - 12, 1996.

Reconnaissance Inspection Observations

The building was and is currently an abandoned facility. All the windows along the ground floor were either broken or missing. There were several unsecured access points into the structure from Piquette and Hastings Streets. The ten foot high chain link fence surrounding the property to the south, which was attached to the east and west walls of the building, was not breached. The gate, however, was not locked allowing access into the open lot storage area. Numerous metal frames and other miscellaneous items were stacked in the storage lot either along the south wall of the building or against the chain link fence. The area in the center of the lot was generally open. There were two truck delivery well areas, one to the west and one to the east of the

building filled with oil covered water. Trash and other debris pulled from the interior of the building were scattered or piled in these two areas. Entry into the building interior was possible from the truck wells. The ground floor was stripped of all equipment. There were however, trash and other debris scattered throughout the ground level. Ceiling tiles, light fixtures and ACM pipe wrap materials in the office area were torn and scattered about. Trash was also found in this area. All three of the building elevators were removed. Access into the darkened elevator shafts was not restricted. The stairways were open with no lighting available. The second through sixth floors showed evidence of vandalism with trash and portions of the building scattered about. Also, the office areas of these floors were vandalized in a similar fashion to that of the first floor. Evidence of recent human occupation was noted on nearly every floor of the building in the office areas.

See Figures 2 through 2E for the Property Features Maps.

Photographs of the Carter Color Coat property taken during the BFRA are provided in Appendix A.

As part of the BFRA, the Michigan Department of Community Health (MDCH) accompanied the investigation team during the reconnaissance inspection to collect information needed to develop a Health Consultation Assessment. The results of the MDCH assessment can be found in the Health Consultation of the Carter Color Coat property in Appendix B.

Building Audit

In addition to observations noted in the reconnaissance section, the following areas of concern were noted during the property/building audit:

- Stained and discolored wooden block flooring covered the western half of five of the six floors of the building;
- A trench, approximately three feet wide and four feet deep encircled the ground floor in which sedimentation and other debris were deposited;
- A large pit, of unknown dimensions, is located in the northwest corner of the ground floor;
- Seven rectangular pits, several of which contained oil fluids and water, were located in the east dock truck receiving area on the ground floor:
- Approximately twenty five drums and barrels were observed on the ground floor in the waste storage area;
- Potential asbestos containing material (PACM) in the office and industrial areas on all six floors of the building;
- PACM in pipewrap mud joints and around pipes was observed on all six floors along with PACM in electrical insulation material on the fifth floor;

- A paint tank area, cleaner tank storage area and zinc phosphating sludge treatment area, all of which were part of the Cameo and Carter Color Coat operations, were located on the second floor;
- Peeling paint and paint chips, which may contain lead, littered the floors of all six levels;
- Former GMC bonderite phosphating process (with zinc, nickel, manganese, chromium) equipment located on the sixth floor.

The asbestos inspection of the Carter Color Coat property was conducted on June 12, 1996 by licensed Pre-Remedial Group staff. The asbestos samples were collected following the sampling procedure outlined in the work plan. See Appendix C for the Asbestos Inspection Report for the Carter Color Coat property. The analysis of the eighteen (18) samples collected for asbestos analysis indicated the presence of asbestos in the building. The amount observed of asbestos containing material (ACM) meets the NESHAP, 40 CFR 61, Subpart M, Effective Date: November 20, 1990 Definition of Category I nonfriable ACM which includes resilient floor coverings containing more than 1% asbestos as well as Regulated Asbestos Containing Material (RACM) which includes all friable ACM.. The amount of observed ACM material in the building exceeds the NESHAP demolition standards of 260 linear feet on pipes and 160 square feet of ACM.

Sampling Procedures and Results

On June 11, 1996, MDEQ Pre-Remedial Group staff collected eighteen (18) surficial soil samples, two (2) surface water samples five (5) wooden block floor samples and six (6) paint chip samples from suspected areas of contamination at the Carter Color Coat property. These samples were collected by the investigation team to determine the levels of EPA Target Compound List compounds (organic compounds) and Target Analyte List analytes (inorganic compounds) which may be present at the property.

Standard MDEQ collection and decontamination procedures, as outlined in the work plan, were adhered to during the collection of all samples. All samples were packaged and shipped in accordance with EPA required procedures and all EPA quality assurance/quality control procedures were followed. Laboratory analytical data for all the sample analyses are provided in Appendix D.

Surficial Soil Samples

The intent of the surficial soil sampling was to determine the potential for possible contaminant migration from suspected source areas, to characterize any possible contamination on the property, to determine any direct contact threats posed to nearby residential populations and future workers and the health and safety concerns, if any, associated with the surficial soils at the property. Eighteen (18) surficial soil samples were collected from the ground level trench at the Carter Color Coat property.

All surficial soil samples were collected using stainless steel trowels according to the procedures outlined in the work plan. See Figure 3 for a map showing surficial soil sample locations. For a description of the surficial soil sample locations and the sample characteristics, refer to Table 1. Table 2 gives a summary of the surficial soil sample analytical results with comparisons to the Generic Cleanup Criteria of Part 201 of NREPA, 1994 PA 451, as amended (formerly known as the Michigan Environmental Response Act).

Contaminants were found in all the surficial soil samples except SS14 at concentrations which exceeded both the Generic Residential and Industrial Cleanup Criteria for Direct Contact values. These contaminants included the following: benzo(a)pyrene, benzo(a)anthracene, dibenz(a,h)anthracene, Aroclor 1254 (PCB), arsenic and lead. Only Aroclor 1254 (PCB), arsenic and lead were in concentrations which exceeded the Generic Industrial Cleanup Criteria.

Surface Water Samples

The surface water samples were collected to determine if there was any migration of possible contamination to the Detroit River via the city storm sewers or to areas of ponded water on the property in the flooded truck wells and the zinc phosphating/sludge treatment area pit on the second floor. These samples were also collected to determine the potential health and safety concerns, if any, associated with these water bodies to characterize any possible contamination in the water on the property and to determine any direct contact threats posed to nearby residential populations and future workers. Two (2) surface water samples, including one (1) duplicate sample, were collected from the truck well in the eastern half of the property and from the zinc phosphating and sludge treatment area pit on the second floor of the Carter Color Coat property.

All surface water samples were collected by direct immersion of the sample bottle into the water according to the procedures outlined in the work plan. See Figures 3 and 4 for the maps showing surface water sample locations. Surface water sample location and characteristic descriptions can be found in Table 3. Analysis of the surface water samples detected no contaminants in concentrations which exceeded either the Generic Residential or Industrial Cleanup Criteria for Direct Contact values of NREPA. Therefore, a summary table of the surface water sample analysis was not developed for this report.

Other Sampling

Wooden Block Flooring Sampling

Samples of stained, square wooden blocks, used as flooring material in the western half of the building on floors one through five. were collected. The samples were analyzed by the MDEQ Laboratory for semi-volatiles and PCBs. Analysis of these samples detected the presence of benzo(a)anthracene, benzo(b)fluoranthene and benzo(a)pyrene at levels which exceeded both the NREPA Part 201 values for the Generic Residential and Industrial Cleanup Criteria for Direct Contact hazard. See Figures 3 through 8 for maps showing the wooden block sampling locations , Table 5 for the wooden block sampling analysis and Appendix E for the complete wooden block analytical analysis.

Paint Chip Sampling for Lead

Samples of the paint found throughout the building were collected from each of the six floors. These samples were sent to the MDEQ Laboratory for analysis for lead content. Analysis of these samples detected lead in concentrations which exceeded both the NREPA Generic Residential and Industrial Cleanup Criteria for lead. See Figures 3 through 8 for maps showing the paint chip sample locations and Table 6 for the paint chip sample analysis and Appendix F for the complete paint chip sample analytical results.

DISCUSSION

Analysis of the surficial soil, wooden blocks and paint chip samples collected during the BFRA, detected the presence of benzo(a)anthrecene, benzo(b)fluoranthene, benzo(a)pyrene, dibenzo(a,h)anthracene, Aroclor 1254 (PCB), arsenic and lead. These contaminants of concern were detected at concentrations greater than the Generic Residential Cleanup Criteria of Part 201 of the NREPA. The concentrations of these contaminants were also found to be greater than the Generic Industrial Cleanup Criteria of Part 201 of the NREPA. Because these contaminants were detected at concentrations in excess of the Generic Residential Cleanup criteria, the Carter Color Coat property qualifies as a facility under Part 201.

All of these contaminants were detected in the majority of the soil samples collected from the ground floor trench. Benzo(a)anthracene was detected in four of the five wooden block samples while benzo(b)fluoranthene and benzo(a)pyrene were found in all five wooden block floor samples. Lead at elevated levels was found in all six of the paint chip samples. Therefore, contaminants of concern are found throughout the six floors of the Carter Color Coat building. In addition, friable and non-friable ACM materials were documented throughout the building structure. The contaminants of concern should be considered with respect to responsibilities that may exist under part 201 of NREPA. The nature of any response activity which may be required is dependent on the intended use of the property.

Based on the findings of the BFRA investigation and the MDCH Health Consultation Assessment, the following issues should be addressed before or during the redevelopment of the Carter Color Coat property:

- All regulated asbestos containing materials should either be removed from the building or encapsulated during any revitalization of the structure. Removal of ACM must follow NESHAP guidelines.

- All trash and debris which has been dumped in the building or is the result of vandalism should be removed and disposed of properly.

- Restricting building access should be addressed to reduce the risk of direct contact potential for area residents and workers to contaminants found on the property.

- Removal of all lead based paint chips will be required during building renovation.

- Removal of the contaminated wooden block flooring for proper disposal will be required during building renovation.

- Removal of the sediment material in the ground floor trench for proper disposal will be required during renovation.

BIBLIOGRAPHY

1. Environmental Mitigation Group (EMG) Building Inspection Report for Carter Color Coat Incorporated, February 24, 1994.

2. PRC Environmental Management Incorporated, Preliminary Assessment/Visual Site Inspection for Carter Color Coat Incorporated, February 20, 1992.

3. MDEQ-ERD property file for Carter Color Coat

4. MDNR, Site Inspection/Activity Report for Carter Color Coat, March 1, 1995

FIGURE 1

PROPERTY LOCATION MAP

FIGURE 2 PROPERTY FEATURES MAP GROUND FLOOR

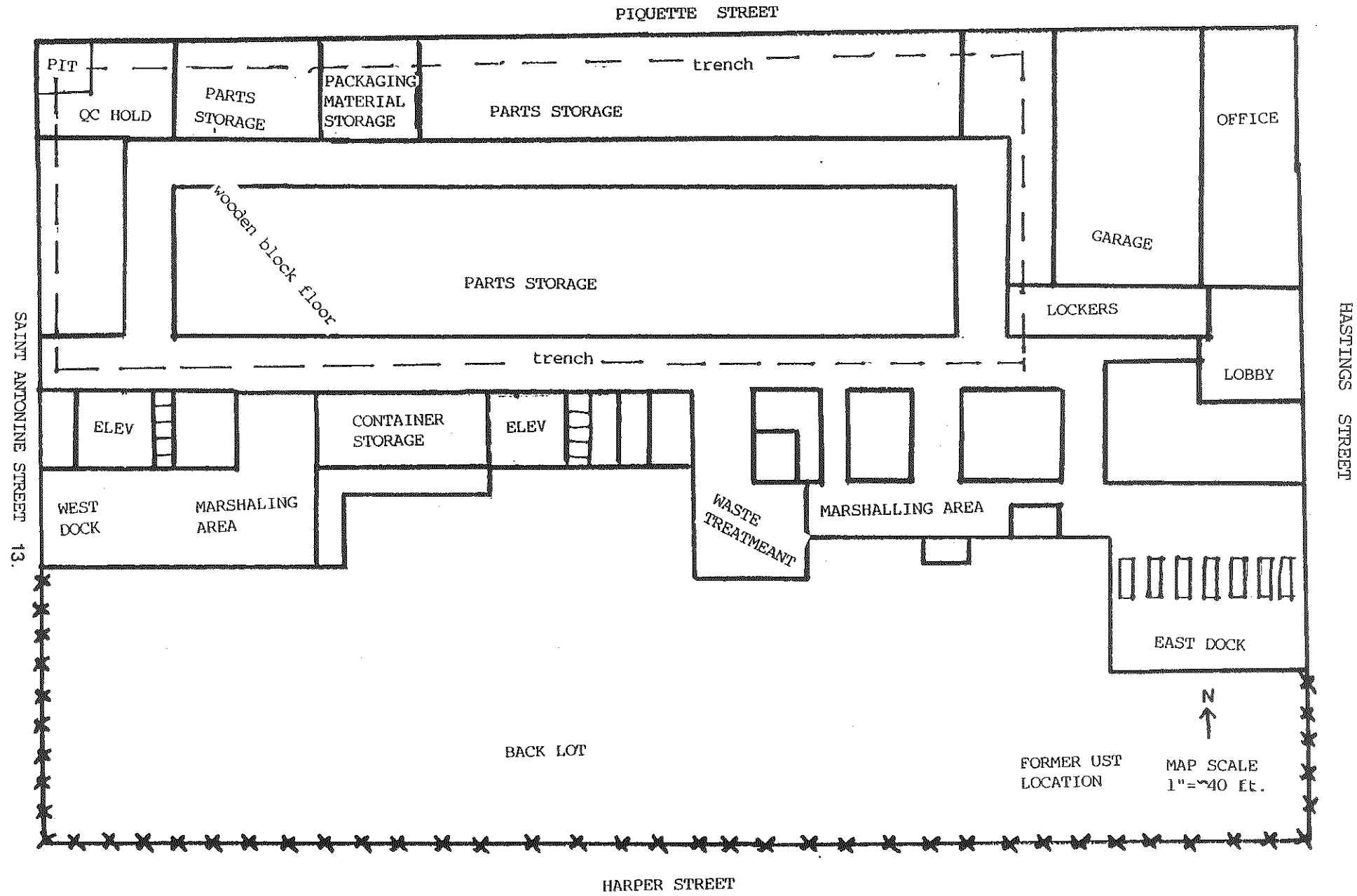
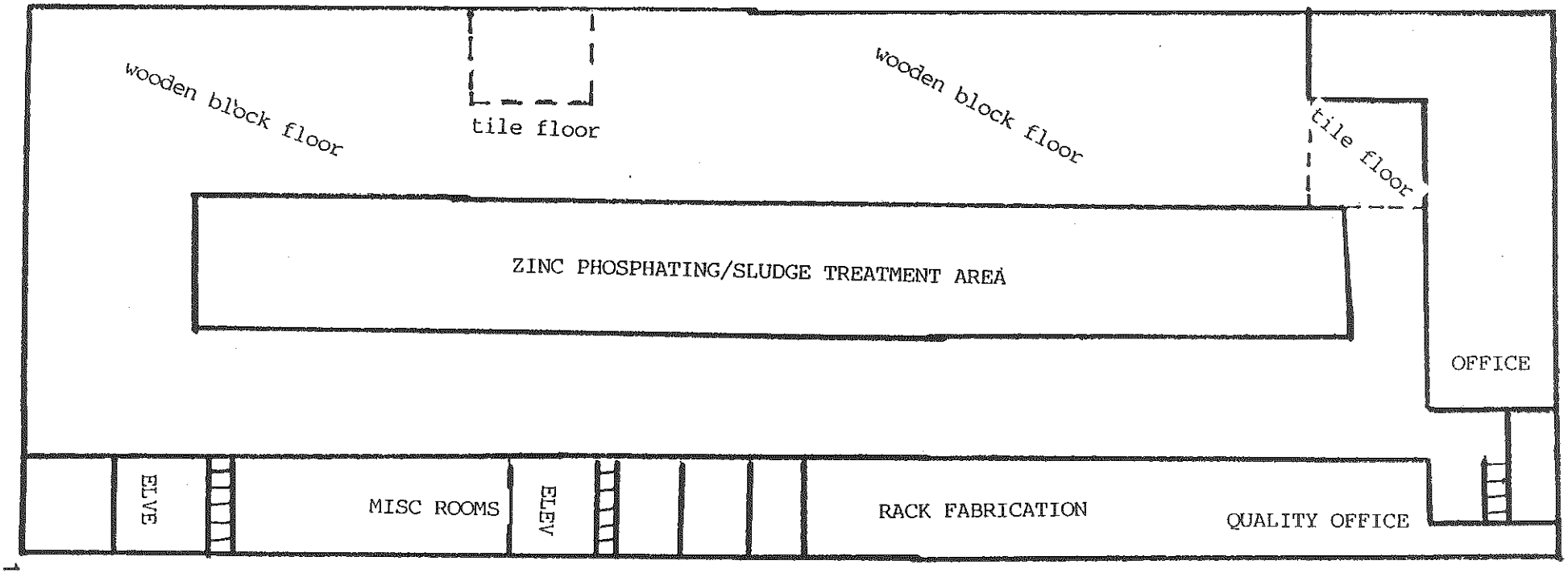


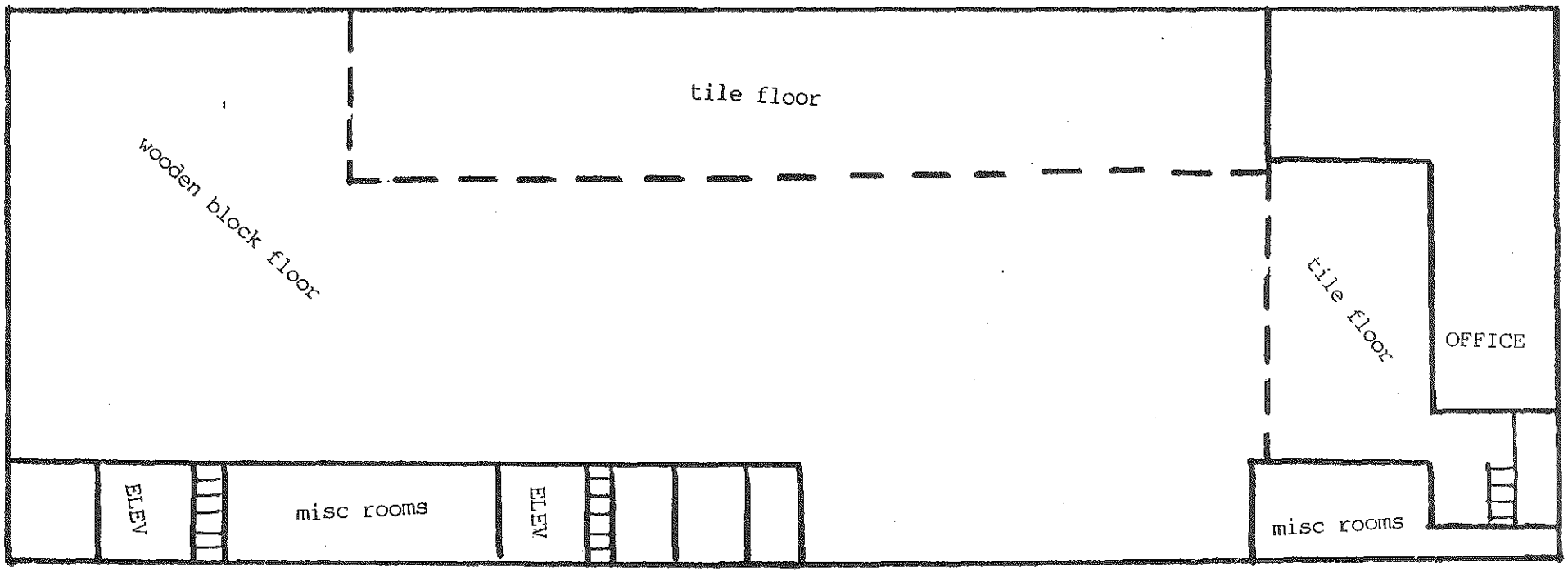
FIGURE 2A PROPERTY FEATURES MAP SECOND FLOOR



N

MAP SCALE
1"=~40 ft.

FIGURE 2B PROPERTY FEATURES MAP THIRD FLOOR



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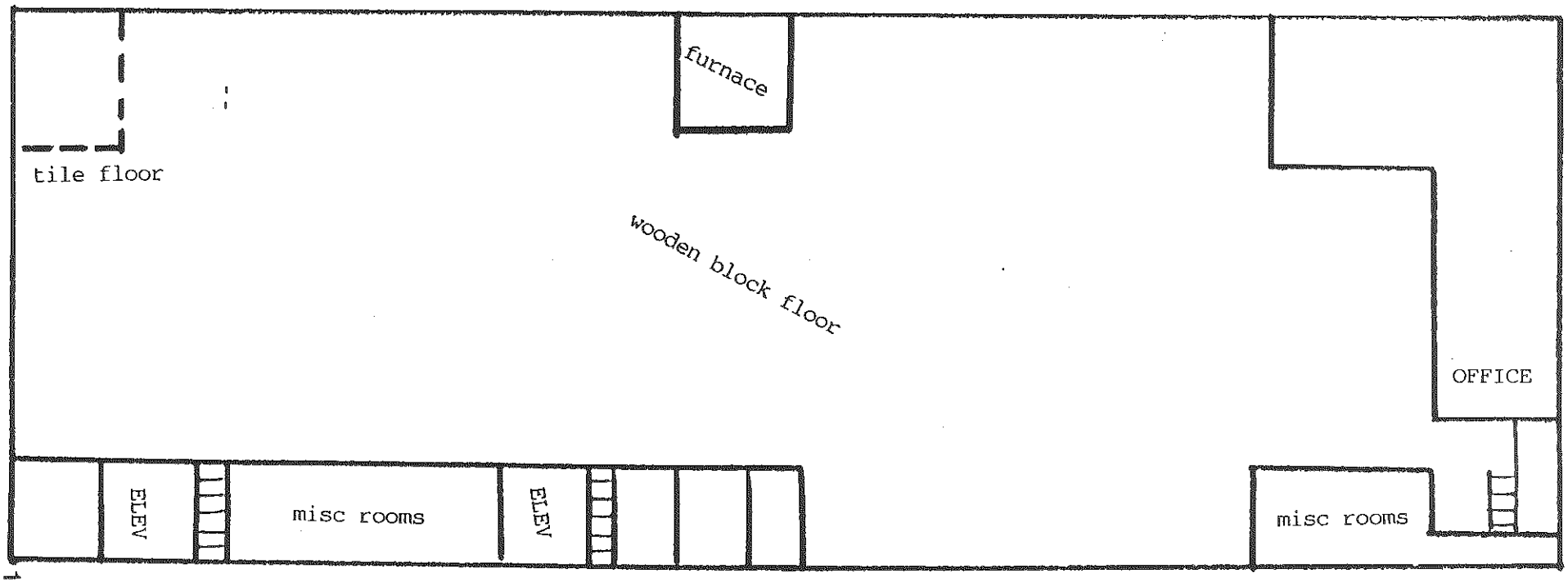
MAP SCALE
1"=~40 ft.

FIGURE 2C PROPERTY FEATURES MAP FOURTH FLOOR



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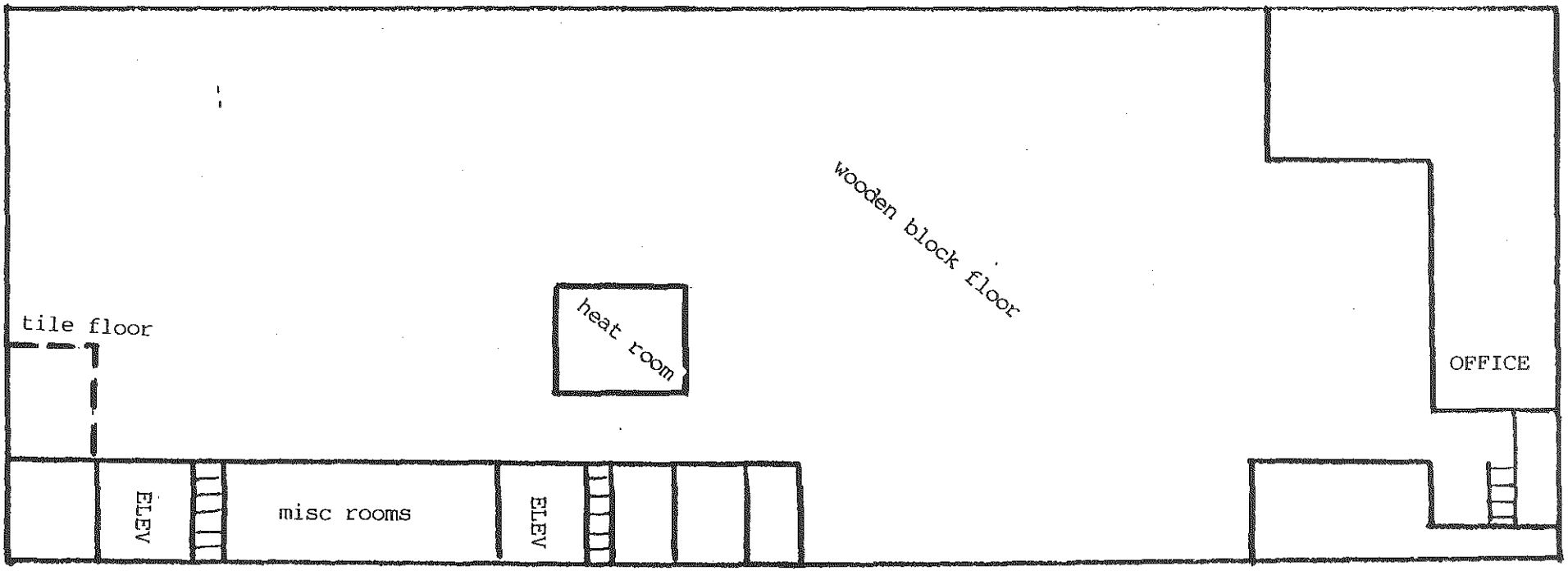
MAP SCALE
1"=40 ft.

FIGURE 2D PROPERTY FEATURES MAP FIFTH FLOOR



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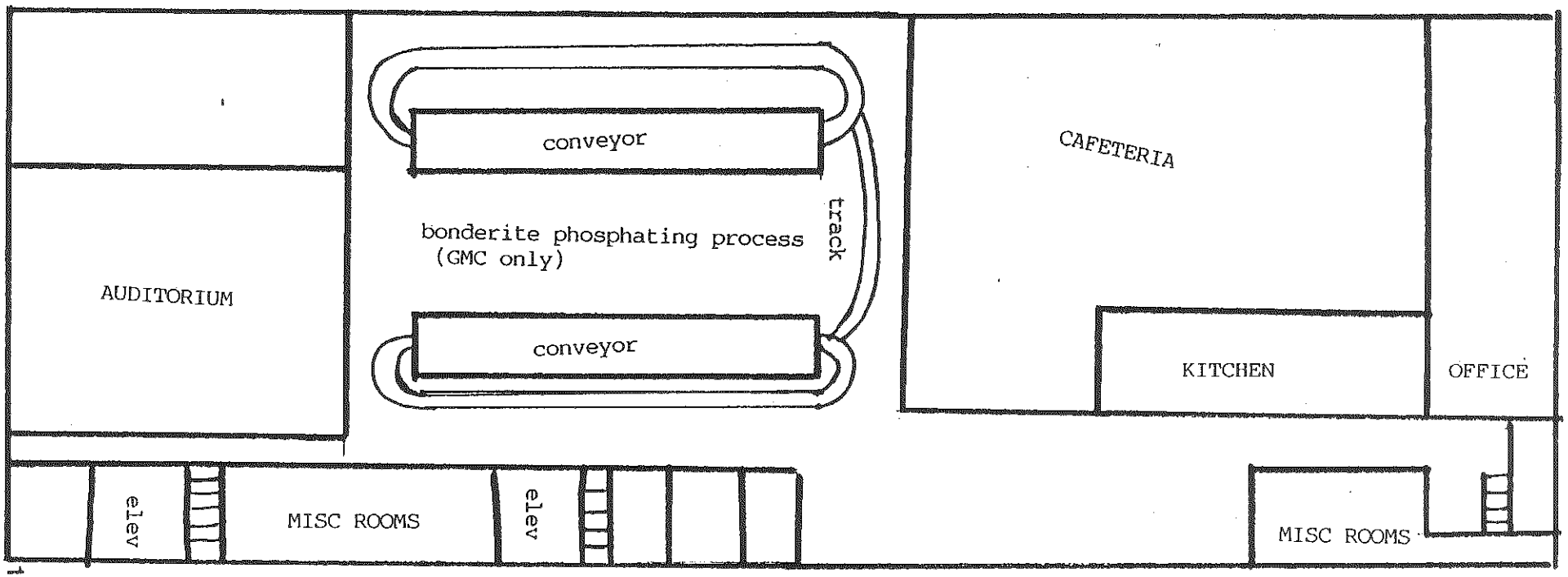
MAP SCALE
1"=~40 ft.

FIGURE 2E PROPERTY FEATURES MAP SIXTH FLOOR



N

MAP SCALE
1"= ~ 40 ft.

FIGURE 3 SAMPLING LOCATIONS GROUND FLOOR

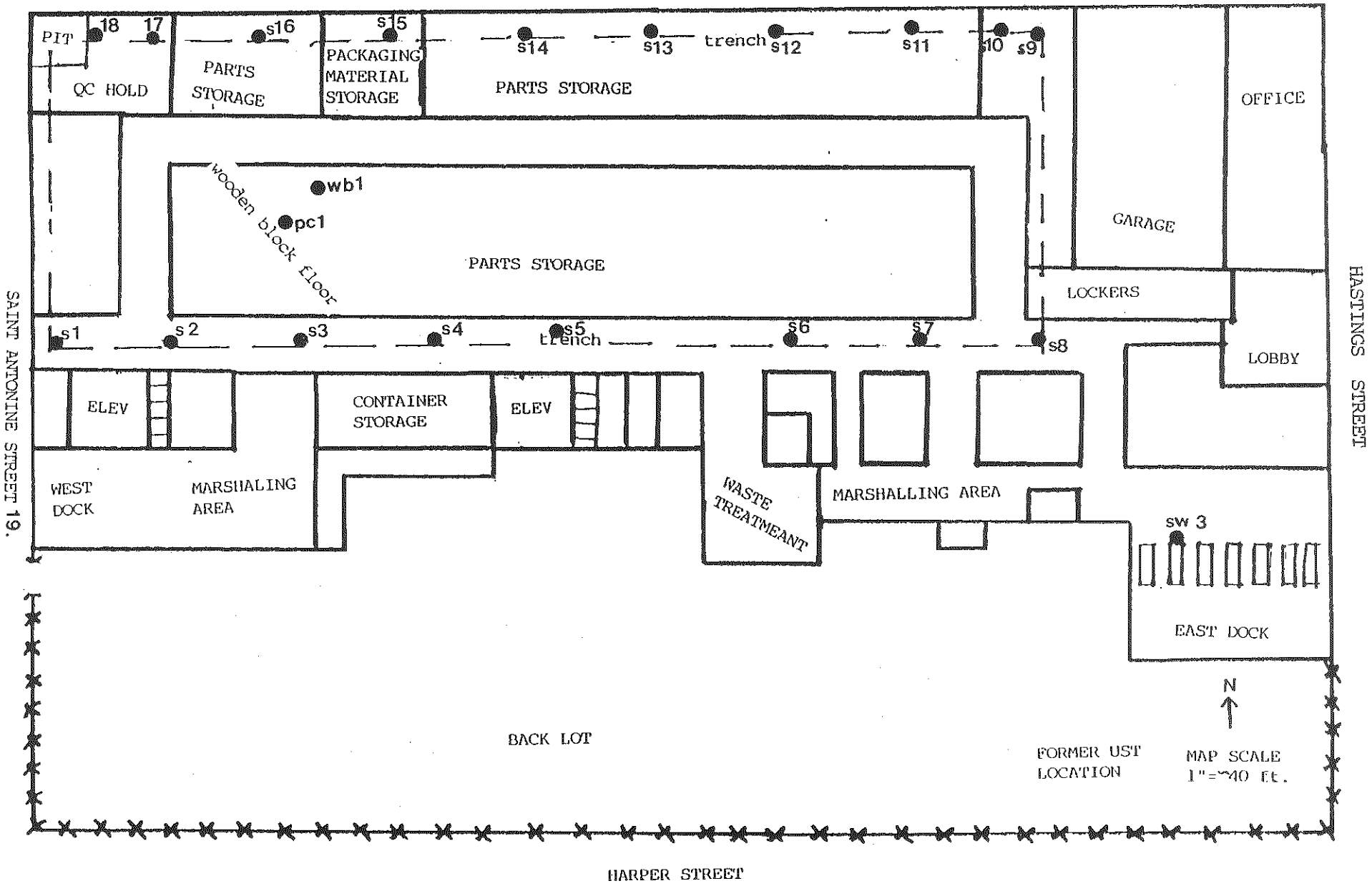


TABLE 1

SOIL SAMPLE DESCRIPTIONS

SAMPLE#	LOCATION	APPEARANCE	DEPTH	DESIGNATION
SS1	Collected from ground floor trench 2 feet north of the southwest corner of building	Black and brown coarse grained sand intermixed with wood and brick pieces	0 - 6 in.	Shallow grab sample
SS2	Collected from ground floor trench 30 feet east of SS 1 location	Brown to black coarse grained sand with wood paint chips, brick pieces	0 - 6 in.	Shallow grab sample
SS3	Collected from ground floor trench 21 feet east of SS2 location	Black to brown coarse grained sand with paint chips and wood pieces	0 - 2 -in.	Shallow grab sample
SS4	Collected from ground floor trench 24 feet south east of Column G21	Black coarse grained sand with paint chips wood pieces	0 - 2 in.	Shallow grab sample
SS5	Collected from ground floor trench 25 feet east of SS4 location	Black coarse grained sand with paint chips and wood pieces	0 - 2 in.	Shallow grab sample
SS6	Collected from ground floor trench 200 feet east of SS5 location	Black coarse grained sand with paint chips	0 - 2 in.	Shallow grab sample
SS7	Collected from ground floor trench 61 feet east of SS6 location	Brown fine to medium grained sand	0 - 2 in.	Shallow grab sample
SS8	Collected from ground floor trench 33 feet east of SS7 location	Black coarse grained sand with paint chips	0 - 2 in.	Shallow grab sample

TABLE 1 (cont.)

SOIL SAMPLE DESCRIPTIONS

SAMPLE#	LOCATION	APPEARANCE	DEPTH	DESIGNATION
SS9	Collected from ground floor trench 3 feet west of garage in north-east corner of building	Brown to black coarse grained sand	0 - 2 in	Shallow grab sample
SS10	Collected from ground floor trench 23 feet west of SS9 location	Black coarse grained material with paint chips	0 - 2 in	Shallow grab sample
SS11	Collected from ground floor trench 90 feet west of SS10 location	Brown coarse grained sand with gray material intermixed	0.-.2 in	Shallow grab sample
SS12	Collected from ground floor trench 24 feet west of SS11 location	Brown coarse grained sand with paint chips	0 - 2 in	Shallow grab sample
SS13	Collected from ground floor trench 47 feet west of SS12 location	Brown and gray coarse sand intermixed with chips	0 - 2 in	Shallow grab sample
SS14	Collected from ground floor trench 22 feet west of SS13 location	Gray coarse grained sand	0 - 2 in	Shallow grab sample
SS15	Collected from ground floor trench 36 feet west of SS14 location	Gray coarse grained sand	0 - 2 in	Shallow grab sample
SS16	Collected from ground floor trench 32 feet west of SS15 location	Light brown coarse grained sand	0 - 2 in	Shallow grab sample
SS17	Collected from ground floor trench 127 feet west of SS16 location	Black coarse grained sand with paint chips	0 - 2 in	Shallow grab sample

TABLE 1 (cont)

SOIL SAMPLE DESCRIPTIONS

SAMPLE#	LOCATION	APPEARANCE	DEPTH	DESIGNATION
SS18	Collected from ground floor trench 44 feet west of SS17	Brown coarse grained sand with paint chips	0 - 2 in	Shallow soil sample

TABLE 2

SOIL SAMPLE SUMMARY

SAMPLE #	CONTAMINANT	SAMPLE CONCENTRATION	PART 201 RESIDENTIAL DIRECT CONTACT CLEANUP CRITERIA	PART 201 INDUSTRIAL DIRECT CONTACT CLEANUP CRITERIA
SS1	Benzo(a)pyrene	8,200 ug/kg	1,400 ug/kg	21,000 ug/kg
	Dibenz(a,h)anthracene	3,900 ug/kg	1,400 ug/kg	21,000 ug/kg
	Aroclor 1254	3,700 ug/kg	2,300 ug/kg	21,000 ug/kg
	Lead	14,200 mg/kg	400 mg/kg	400 mg/kg
SS2	Benzo(a)pyrene	10,000 ug/kg	1,400 ug/kg	21,000 ug/kg
	Benzo(a)anthracene	16,000 ug./kg	14,000 ug/kg	21,000 ug/kg
	Dibenz(a,h)anthracene	5,700 ug/kg	1,400 ug/kg	21,000 ug/kg
	Aroclor 1254	24,000 ug/kg	2,300 ug/kg	21,000 ug/kg
	Lead	16,200 mg/kg	400 mg/kg	400 mg/kg
SS3	Benzo(a)anthracene	21,000 ug/kg	14,000 ug/kg	210,000 ug/kg
	Benzo(a)pyrene	11,000 ug/kg	1,400 ug/kg	21,000 ug/kg
	Dibenz(a,h)anthracene	5,300 ug/kg	1,400 ug/kg	21,000 ug/kg
	Aroclor 1254	47,000 ug/kg	2,300 ug/kg	21,000 ug/kg
	Lead	5,800 mg/kg	400 mg/kg	400 mg/kg
SS4	Aroclor 1254	57,000 ug/kg	2,300 ug/kg	21,000 ug/kg
	Arsenic	135 mg/kg	6.6 mg/kg	83 mg/kg
	Lead	17,900 ug/kg	400 ug/kg	400 ug/kg
SS5	Benzo(a)pyrene	7,100 ug/kg	1,400 ug/kg	21,000 ug/kg
	Dibenz(a,h)anthracene	2,600 ug/kg	1,400 ug/kg	21,000 ug/kg
	Lead	782 mg/kg	400 mg/kg	400 mg/kg
SS6	Lead	726 mg/kg	400 mg/kg	400 mg/kg
SS7	Aroclor 1254	42,000 ug/kg	2,300 ug/kg	21,000 ug/kg
	Lead	854 mg/kg	400 mg/kg	400 mg/kg

TABLE 2 (cont.)

SOIL SAMPLE SUMMARY

SAMPLE #	CONTAMINANT	SAMPLE CONCENTRATION	PART 201 RESIDENTIAL DIRECT CONTACT CLEANUP CRITERIA	PART 201 INDUSTRIAL DIRECT CONTACT CLEANUP CRITERIA
SS8	Benzo(a)anthracene	14,000 ug/kg	14,000 ug/kg	210,000 ug/kg
	Benzo(b)fluoranthene	19,000 ug/kg	14,000 ug/kg	21,000 ug/kg
	Benzo(a)pyrene	16,000 ug/kg	1,400 ug/kg	21,000 ug/kg
	Dibenz(a,h)anthracene	7,200 ug/kg	1,400 ug/kg	21,000 ug/kg
	Lead	1,310 mg/kg	400 mg/kg	400 mg/kg
SS9	Aroclor 1254	9,200 ug/kg	2,300 ug/kg	21,000 ug/kg
	Lead	2,580 mg/kg	400 mg/kg	400 mg/kg
SS10	Benzo(a)pyrene	2,700 ug/kg	1,400 ug/kg	21,000 ug/kg
	Lead	2,370 mg/kg	400 mg/kg	400 mg/kg
SS11	Benzo(a)anthracene	19,000 ug/kg	14,000 ug/kg	210,000 ug/kg
	Benzo(a)pyrene	13,000 ug/kg	1,400 ug/kg	21,000 ug/kg
	Dibenz(a,h)anthracene	4,000 ug/kg	1,400 ug/kg	21,000 ug/kg
SS12	Benzo(a)pyrene	3,000 ug/kg	1,400 ug/kg	21,000 ug/kg
SS13	Benzo(a)pyrene	3,800 ug/kg	1,400 ug/kg	21,000 ug/kg
SS14	NO CONTAMINANT OF CONCERN DETECTED ABOVE PART 201 Criteria			
SS15	Lead	45,900 mg/kg	400 mg/kg	400 mg/kg
SS16	Benzo(a)anthracene	4,200 ug/kg	1,400 ug/kg	1,400 ug/kg
	Dibenz(a,h)anthracene	1,800 ug/kg	1,400 ug/kg	21,000 ug/kg
	Lead	1,630 mg/kg	400 mg/kg	400 mg/kg
SS17	Benzo(a)anthracene	16,000 ug/kg	14,000 ug/kg	210,000 ug/kg
	Benzo(a)pyrene	16,000 ug/kg	1,400 ug/kg	21,000 ug/kg
	Dibenz(a,h)anthracene	8,000 ug/kg	1,400 ug/kg	21,000 ug/kg
	Lead	10,300 mg/kg	400 mg/kg	400 mg/kg

TABLE 2 (cont.)

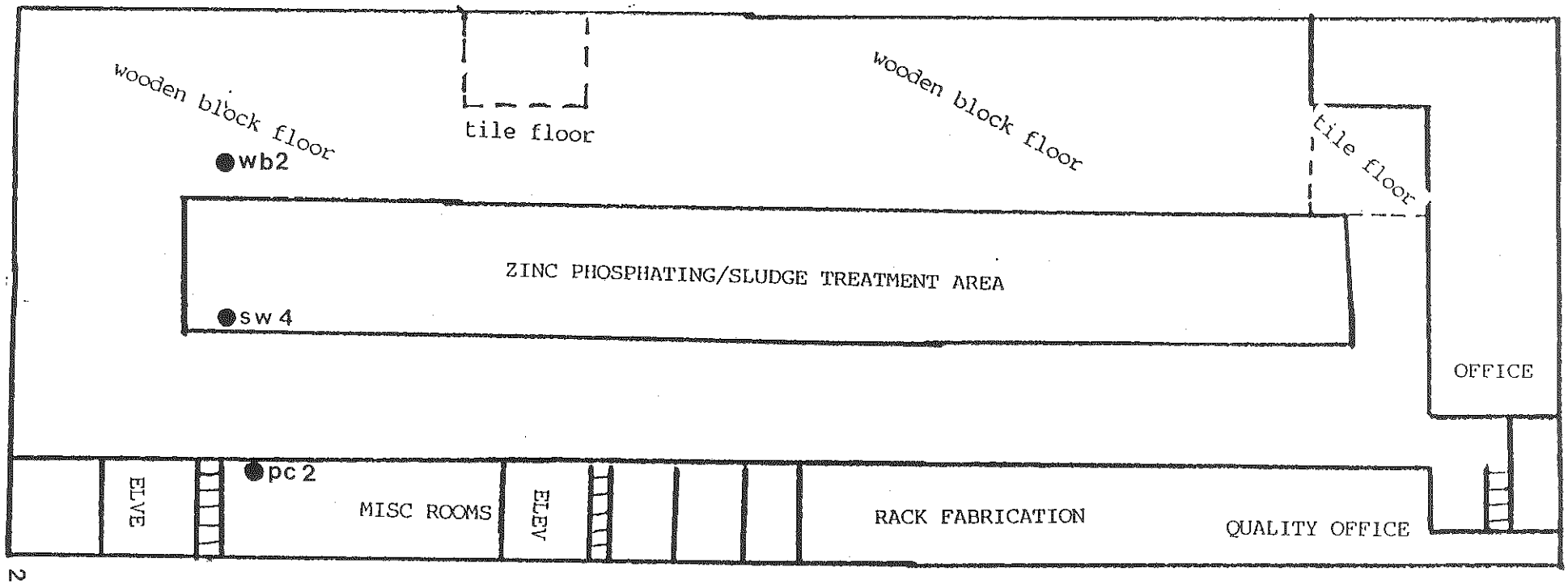
SOIL SAMPLE SUMMARY

SAMPLE #	CONTAMINANT	SAMPLE CONCENTRATION	PART 201 RESIDENTIAL DIRECT CONTACT CLEANUP CRITERIA	PART 201 INDUSTRIAL DIRECT CONTACT CLEANUP CRITERIA
SS18	Benzo(a)pyrene	4,200 ug/kg	1,400 ug/kg	21,000 ug/kg
	Dibenz(a,h)anthracene	1,600 ug/kg	1,400 ug/kg	21,000 ug/kg
	Lead	2,230 mg/kg	400 mg/kg	400 mg/kg

µg/kg = microgram/kilogram (parts per billion (ppb)).
mg/kg = milligram/kilogram (parts per million (ppm)).

A total of eighteen (18) surficial soil samples were collected during the BFRA

FIGURE 4 SAMPLING LOCATIONS SECOND FLOOR



N

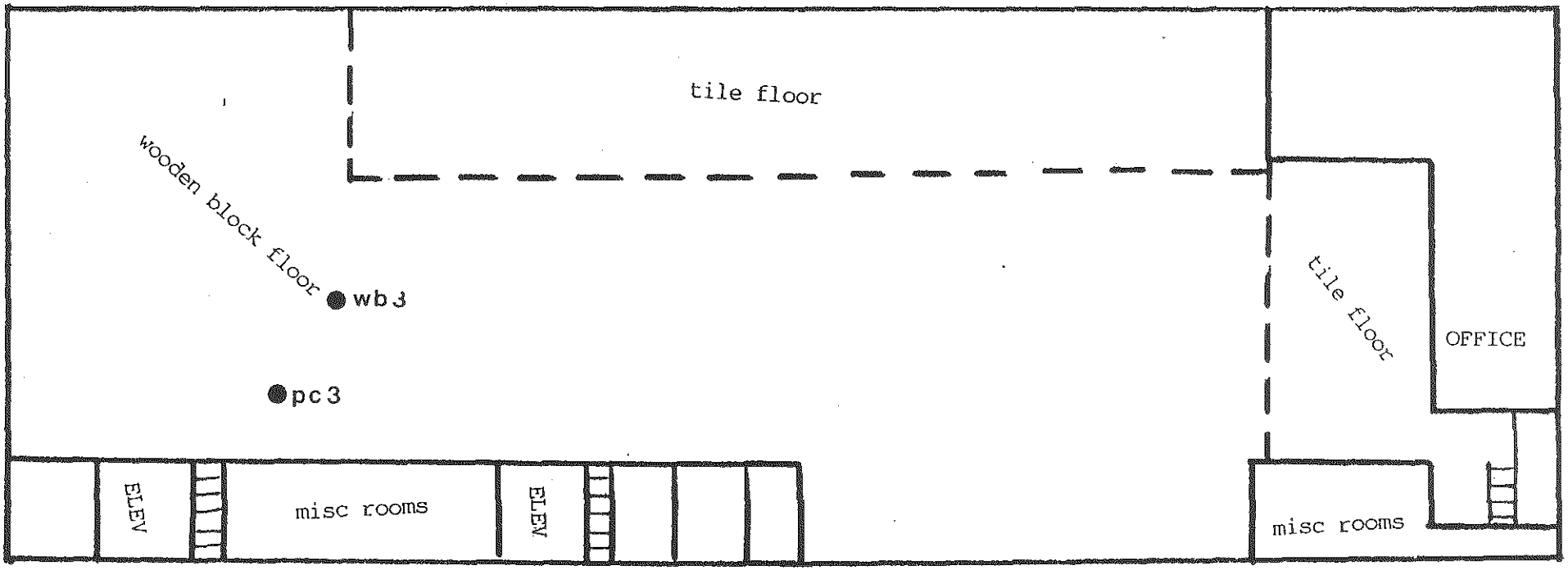
MAP SCALE
1"=40 ft.

TABLE 3

SURFACE WATER SAMPLE DESCRIPTIONS

SAMPLE #	LOCATION	APPEARANCE	COND. (µs/cm) pH TEMP.(°C)	DEPTH (in.)	DESIGNATION
SW3	Collected from Bay in truck delivery area in the southeast corner of the building	Clear water with tan to brown colored oil skimming the surface	Data not available		Grab sample
SW4	Collected from zinc phosphating trench area on the second floor	Rust colored water	Data not available		Grab sample
SW4D	Collected from zinc phosphating trench area on the second floor	Rust colored water	Data not available		Grab sample

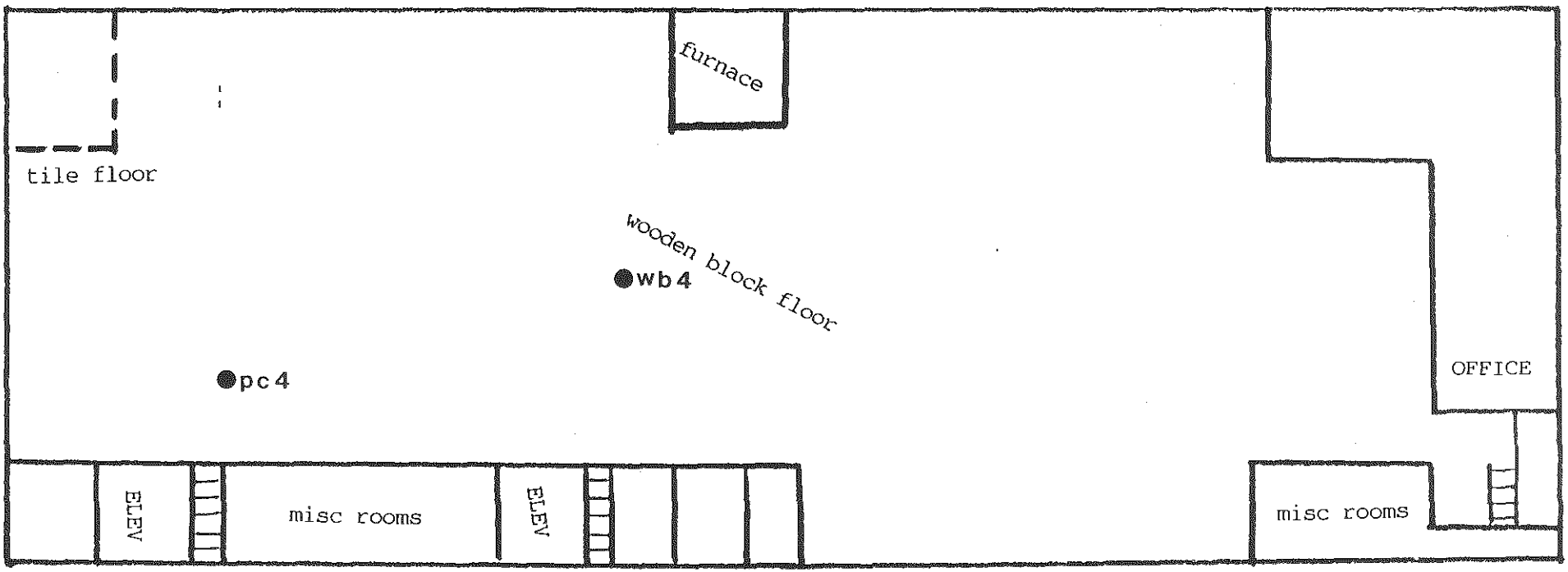
FIGURE 5 SAMPLING LOCATIONS THIRD FLOOR



N

MAP SCALE
1"=~40 ft.

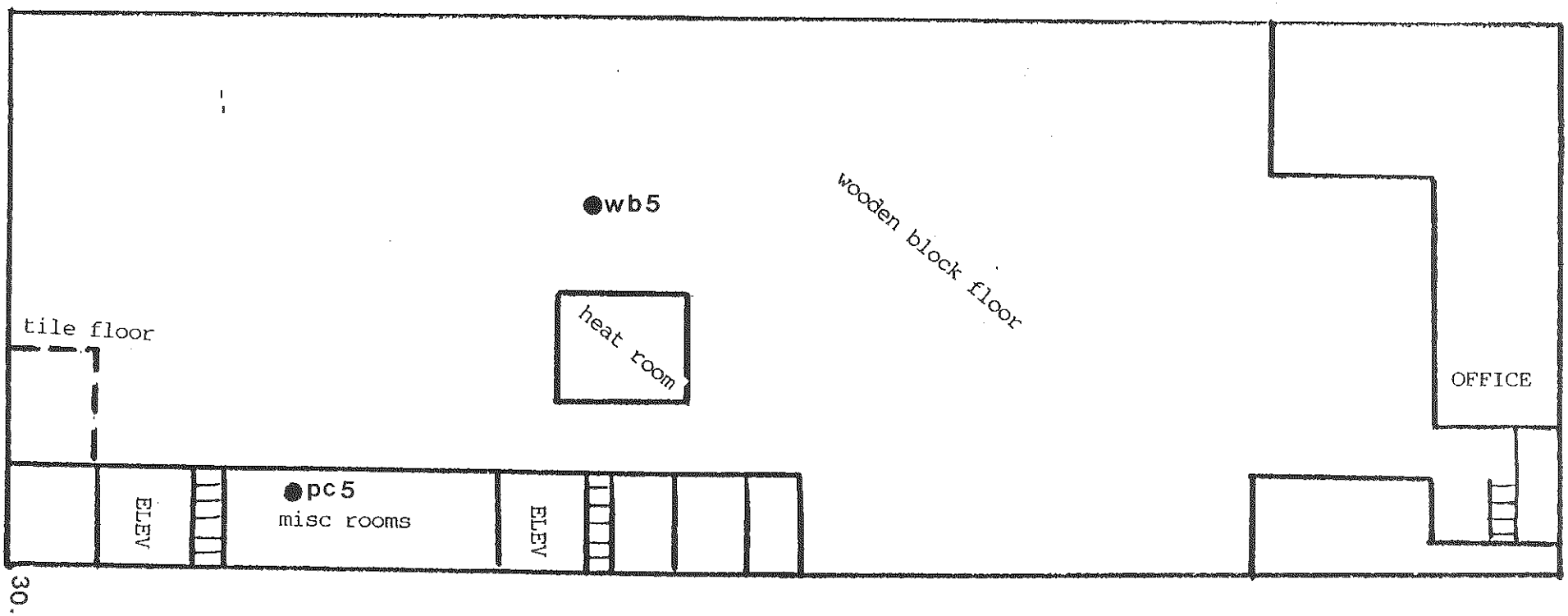
FIGURE 6 SAMPLING LOCATIONS FOURTH FLOOR



N

MAP SCALE
1"=40 ft.

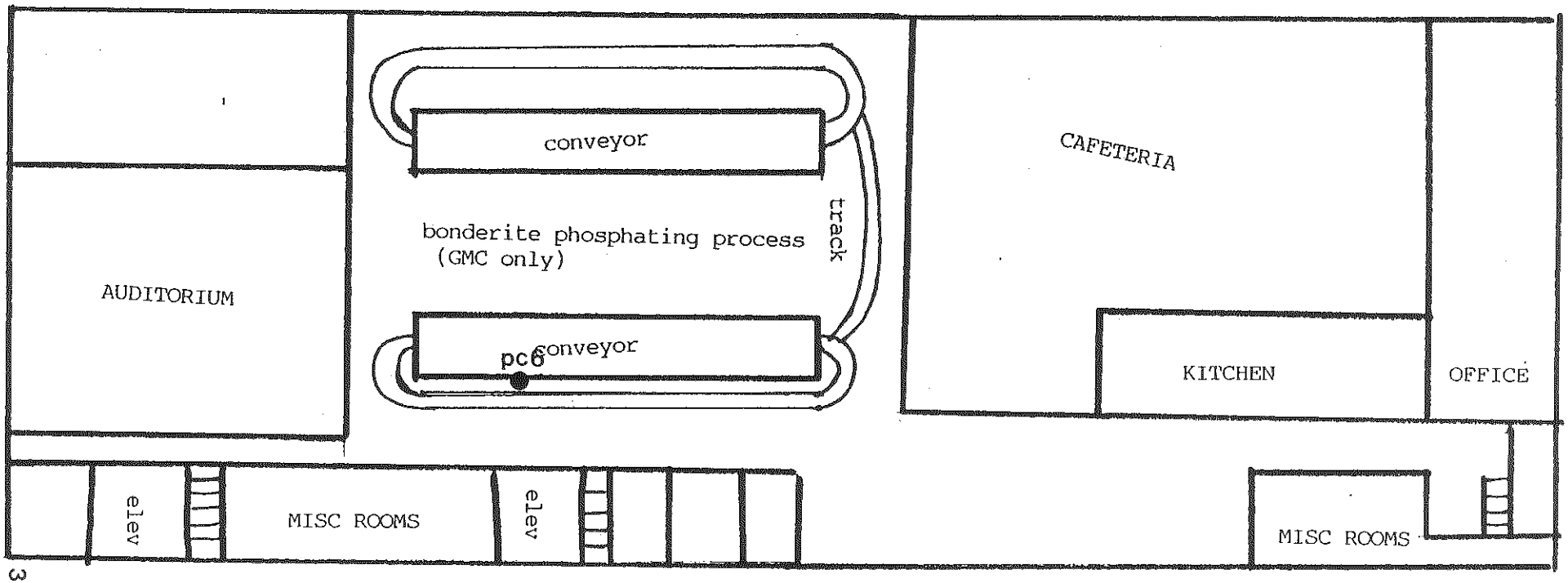
FIGURE 7 . SAMPLING LOCATION FIFTH FLOOR



N

MAP SCALE
1"=~40 ft.

FIGURE 8 SAMPLING LOCATION SIXTH FLOOR



N

MAP SCALE
1"=~40 ft.

TABLE 4

WOODEN BLOCK SAMPLE SUMMARY

SAMPLE #	CONTAMINANT	SAMPLE CONCENTRATION	PART 201 RESIDENTIAL DIRECT CONTACT CLEANUP CRITERIA	PART 201 INDUSTRIAL DIRECT CONTACT CLEANUP CRITERIA
WB1	Benzo(a)anthracene	900,000 ug/kg	14,000 ug/kg	210,000 ug/kg
	Benzo(b)fluoranthene	730,000 ug/kg	14,000 ug/kg	210,000 ug/kg
	Benzo(a)pyrene	490,000 ug/kg	1,400 ug/kg	21,000 ug/kg
WB2	Benzo(b)fluoranthene	320,000 ug/kg	14,000 ug/kg	210,000 ug/kg
	Benzo(a)pyrene	280,000 ug/kg	1,400 ug/kg	21,000 ug/kg
WB3	Benzo(a)anthracene	570,000 ug/kg	14,000 ug/kg	210,000 ug/kg
	Benzo(b)fluoranthene	350,000 ug/kg	14,000 ug/kg	210,000 ug/kg
	Benzo(a)pyrene	320,000 ug/kg	1,400 ug/kg	21,000 ug/kg
WB4	Benzo(a)anthracene	1,700,000 ug/kg	14,000 ug/kg	210,000 ug/kg
	Benzo(b)fluoranthene	1,200,000 ug/kg	14,000 ug/kg	210,000 ug/kg
	Benzo(a)pyrene	980,000 ug/kg	1,400 ug/kg	21,000 ug/kg
WB5	Benzo(a)anthracene	1,600,000 ug/kg	14,000 ug/kg	210,000 ug/kg
	Benzo(b)fluoranthene	1,300,000 ug/kg	14,000 ug/kg	210,000 ug/kg
	Benzo(a)pyrene	830,000 ug/kg	1,400 ug/kg	21,000 ug/kg

µg/kg = microgram/kilogram (parts per billion (ppb)).
mg/kg = milligram/kilogram (parts per million (ppm)).

A total of five (5) wooden block samples were collected during the BFRA.

TABLE 5

PAINT CHIP SAMPLE SUMMARY

SAMPLE #	CONTAMINANT	SAMPLE CONCENTRATION	PART 201 RESIDENTIAL DIRECT CONTACT CLEANUP CRITERIA	PART 201 INDUSTRIAL DIRECT CONTACT CLEANUP CRITERIA
PC1	Lead	13,100 mg/kg	400 mg/kg	400 mg/kg
PC2	Lead	6,650 mg/kg	400 mg/kg	400 mg/kg
PC3	Lead	12,000 mg/kg	400 mg/kg	400 mg/kg
PC4	Lead	5,840 mg/kg	400 mg/kg	400 mg/kg
PC5	Lead	5,250 mg/kg	400 mg/kg	400 mg/kg
PC6	Lead	5,890 mg/kg	400 mg/kg	400 mg/kg

mg/kg = milligram/kilogram (parts per million (ppm)).

A total of six (6) paint chip samples were collected during the BFRA.

APPENDIX A

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: CARTER COLOR COAT PAGE: 1 OF: 17

U.S. EPA ID #: MID980568646

DATE: JUNE 11, 1996

TIME: 0950

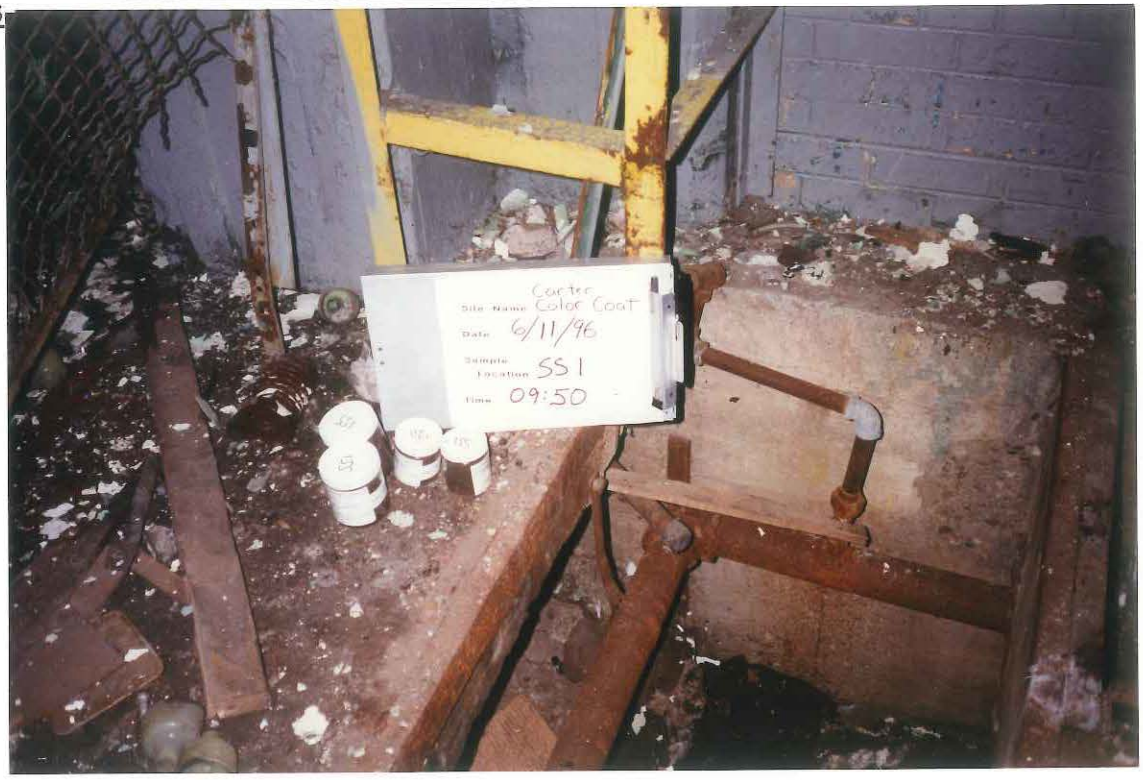
DIRECTION OF PHOTOGRAPH: WEST

WEATHER CONDITIONS: OVERCAST WARM

TEMPERATURE:

PHOTOGRAPH BY: DETGEN

SAMPLE ID: SS 1



DESCRIPTION:
SS1 COLLECTED FROM TRENCH IN THE GROUND FLOOR, SOUTHWEST CORNER OF BUILDING, 2 FEET FROM WEST WALL. SURFICIAL SOIL SAMPLE.

DATE: JUNE 11, 1996

TIME: 0950

DIRECTION OF PHOTOGRAPH: WEST

WEATHER CONDITIONS: OVERCAST WARM

TEMPERATURE:

PHOTOGRAPH BY: DETGEN

SAMPLE ID: SS1

DESCRIPTION:
Long view of sample location.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: CARTER COLOR COAT PAGE: 2 OF: 17
U.S. EPA ID # MID980568646

DATE: JUNE 11, 1996

TIME: 1005

DIRECTION OF PHOTOGRAPH:
NORTH

WEATHER CONDITIONS:
OVERCAST
WARM

TEMPERATURE:

PHOTOGRAPH BY:
DETGEN

SAMPLE ID:
SS 2

DESCRIPTION:
SS 2 COLLECTED FROM TRENCH IN GROUND FLOOR, THIRTY FEET EAST OF SS 1 LOCATION. SURFICIAL SOIL SAMPLE.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: CARTER COLOR COAT PAGE: 3 OF: 17

U.S. EPA ID #: MID980568646

DATE: JUNE 11, 1996

TIME: 1050

DIRECTION OF PHOTOGRAPH: NORTH

WEATHER CONDITIONS: OVERCAST WARM

TEMPERATURE:

PHOTOGRAPH BY: DETGEN

SAMPLE ID: SS 3

DESCRIPTION:
SS 3 COLLECTED FROM TRENCH ON GROUND FLOOR, TWENTY ONE FEET EAST OF SS 2 LOCATION. SURFICIAL SOIL SAMPLE.

DATE: JUNE 11, 1996

TIME: 1050

DIRECTION OF PHOTOGRAPH: NORTH

WEATHER CONDITIONS: OVERCAST WARM

TEMPERATURE:

PHOTOGRAPH BY: DETGEN

SAMPLE ID: SS 3

DESCRIPTION:
Long view of sample location.

FIELD PHOTOGRAPHY LOG SHEET

SITE NAME: CARTER COLOR COAT PAGE: 4 OF: 17

U.S. EPA ID #: MID980568646

DATE: JUNE 11, 1996

TIME: 1100

DIRECTION OF PHOTOGRAPH: NORTH

WEATHER CONDITIONS: OVERCAST WARM

TEMPERATURE:

PHOTOGRAPH BY: DETGEN

SAMPLE ID: SS 4

DESCRIPTION: SS 4 COLLECTED FROM THE TRENCH IN THE GROUND FLOOR, NINETY TWO FEET EAST OF SS 3 LOCATION. SURFICIAL SOIL SAMPLE.

DATE: JUNE 11, 1996

TIME: 1100

DIRECTION OF PHOTOGRAPH: NORTH

WEATHER CONDITIONS: OVERCAST WARM

TEMPERATURE:

PHOTOGRAPH BY: DETGEN

SAMPLE ID: SS 4

DESCRIPTION: Long view of sample location.